

GROUP INTERPRETATION  
OF MULTIPLE FACTOR TESTS

by

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B. S., Central Missouri State College, 1950

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A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Education

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

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## INTRODUCTION

The need for better self-understanding on the part of students has been increasingly recognized in recent years. Parents and teachers have come to understand that it is important for a student to select his goals in accordance with his abilities. Students who will ultimately select their own goals need the opportunity to understand and accept their abilities and limitations (33). The problem lies in finding ways for the school to transfer the information which is collected concerning students' abilities and interest patterns in a manner which will insure understandable and usable knowledge for all individuals. Since increasing enrollments place considerable stress on the counselor's time, and since predicted enrollments point to even greater stress, it seemed desirable to the present writer to make a study of the value of group procedures to be used in the interpretation of multiple factor tests. McDaniel and Shaftel (16) in discussing group activities have pointed out advantages of multiple counseling under certain circumstances. In group interpretation of multiple factor tests, members of the group have a common problem; this is an essential characteristic of group guidance. The problem of each member of such a group would be that of getting a clearer picture of his abilities and those of the competition he is likely to encounter.

Some writers (34), (2), (17) have asked, "Why use multiple counseling?". Advantages from the viewpoint of the

counselor's needs are: (1) It permits the counselor to meet more students with common problems and to disseminate information of value to them. (2) It provides an opportunity to identify students who need individual counseling. (3) It makes more time available for individuals with specific problems. (4) It stimulates the demand for individual help. (5) It prepares the student for individual counseling. Writers (34), (31), (20) have also asked, "When should multiple counseling be used?". Group procedures seem indicated when one wishes to achieve the advantages of a group setting, or when the objectives of counseling can be achieved more efficiently, and as effectively, by the group process. Greater efficiency in counseling might connote either a conservation of time and effort in seeing the same number of students or in being able to provide counseling for more students in the same period. Efficiency in this sense assumes that the quality of the counseling does not diminish.

#### STATEMENT OF THE PROBLEM

This report was undertaken to consider the effectiveness of group interpretation of multiple factor tests. The purposes of the study were to summarize pertinent literature written since 1950 concerning the effectiveness of group procedures, which might be used for the interpretation of multiple factor tests; and, secondly, to interpret the effectiveness of this approach to counseling in terms of the degree to which the counselors, in the literature of the same period, had achieved

the goals which they considered important. The results of the study were used as a basis for selecting guidance procedures to be used in the interpretation of test information obtained from the testing program of Leavenworth Junior High School, Leavenworth, Kansas.

#### DEFINITIONS OF TERMS

Group counseling may be defined for the purposes of this paper as the process by which a group of students with a common problem are led by a counselor to accomplish the goals of counseling (16). The goals will be limited in this study to the possibilities of counselees making effective evaluations of self and opportunities, as interpreted on multiple factor tests.

Multiple factor tests are defined as differential aptitude batteries designed to provide an adequate measure of the individual's standing in each of a number of traits. (15)

Individual counseling is defined as a series of direct contacts with the individual, aimed at offering him assistance in adjusting more effectively to himself and to his environment. (16)

#### PROCEDURE

Two major points of view in counseling procedures were selected as an appropriate problem to study: (1) Group guidance and individual counseling are most effective when

practiced together in the interpretation of test results.

(2) The objectives of counseling are more effectively reached by the use of individual interpretation of tests to the greatest extent possible in the amount of time available. The general bibliography of McDaniel and Shaftel's Guidance in the Modern School (16) and the bibliographies found in Margaret E. Bennett's Guidance in Groups (2) were used as guides in the selection of recent literature on both methods of counseling and on the trends in test interpretation which were under survey. The Review of Educational Research was studied for pertinent information written in this field since 1950. The Encyclopedia of Educational Research, 1960, was examined for the specific problems under consideration. Other books and periodicals appearing in the bibliography of the present study furnished leads to recent writings closely related to the subject "Group Interpretation of Multiple Factor Tests".

#### REVIEW OF THE LITERATURE

This study through a review of the literature presents the use of group guidance in the interpretation of tests as opposed to the exclusive use of individual interpretation. Some answers concerning the proper functions of group guidance and the place for it in the total program were sought. There is considerable disagreement among educators as to the emphasis and function of group processes in the secondary

school program. The review of the literature which follows will be expected to perform two services. One is to answer the question, "Is group interpretation of multifactor tests a sound guidance procedure?". The second service is to review the writings of recognized authorities in guidance for descriptive practices which show the benefits obtained from group guidance processes in educational planning.

Since it was the effectiveness of an aspect of counseling which was being studied, the information was divided into three sections centering around three major points, (1) common elements and differences in group guidance and individual counseling, (2) benefits from group guidance, and (3) dangers and safeguards in group processes.

#### Common Elements and Differences in Group Guidance and Individual Counseling

Group guidance can be justified for reasons which also justify individual counseling. The responsibility of helping students solve their problems is basic to both processes. The first consideration then is how the one process really differs from the other. It is not as simple as saying one procedure deals with a group of students, the other with the individual. The objectives of counseling whether individual or group, are essentially to assist the individual in the following: (1) evaluation of himself, (2) decision making, and (3) carrying through of learning to action (33). Fundamental to all guidance activity is the principle of assisting students

to become more self-understanding and more self-directing.

There are two major ways to assist students - either in groups or individually - but it should be kept in mind that all guidance work is centered on the individual. Group procedures are utilized at those times when a number of individuals with similar concerns can be assisted together. Student planning includes educational and occupational planning; it is a continuous process. Counselors are concerned with helping the student to advance gradually to the point where he will be able to guide himself with a minimum of help from others. Such a consideration points to the need of giving planned attention to such matters as self-appraisal and self-understanding. Parmenter (20) has said:

Guidance workers try, of course, to give some attention to these topic areas through individual interview sessions. However, the present sensible emphasis on guidance services of a preventive and developmental nature, the gradual recognition that all students require guidance services of this type, the increase in school populations, the shortage of counselors qualified to do a thorough piece of work on an individual basis, these and many other factors indicate the desirability, in fact the necessity, of employing group procedures in connection with the treatment of such topic areas as part of the guidance program in elementary and secondary schools.

Parmenter believes group and individual procedures should be considered as complementary. Group procedures should be supplemented by individual procedures, and vice versa, if the guidance program is to be effective and of benefit to all students in the school. He does not believe group work has been given the recognition and status it deserves.



Benjamin C. Willis (30) said in an address (1956) that he believed programs of group guidance are of inestimable value since young people do have problems whether they come to counselors or not. Workers are faced with the necessity of presenting help when the need arises. To carry out this aim a strong steady program of help is needed. Two approaches to a group program have been described as the "instruction - oriented" and the "development - oriented". The difference in orientation determines whether a group leader sees the goal as that of group instruction or group development. Rinn (22) finds group guidance an intriguing concept, offering the promise of serving the guidance function with less time and staff than the two person counseling relationship requires, yet he comments that few schools have successful group guidance programs, and few writers agree on what group guidance means. He believes that the two approaches obscure the real meaning of "group guidance".

In school guidance problems where there is a combination of group procedures and individual counseling, the group unit usually serves as the vehicle for the administration and interpretation of tests. In this phase of his work the counselor can see thirty students. The student may be administered a test or may be given data bearing on his abilities, interests, and personal planning in a group of this size. Group counseling may develop a readiness for an individual interpretative interview, or the student may

actually gain an understanding that saves time in the guidance program (17). It is important that the decisions students are expected to make be considered in planning group activities such as interpretation of the multifactor test profiles. Eighth grade students who are planning their high school programs need information to make wise decisions (8), (24).

McDaniel (17) acknowledges many advantages of group guidance, such as efficiency, economy and social values, but he points out limitations. Although group procedures serve many of the objectives of the school guidance program, they do not serve all of them. Group methods may be useful for presenting information, not only because one arrangement supplies data to the group, but because a group will raise more questions than a single person. However, even though the student comes away from the group procedure with a better grasp of the subject, he may also have a readiness for counseling which will create a problem that only individual counseling can solve. If individual counseling is not available, the group interpretation of test information may lead to unsolved problems for individual students. McDaniel continues that in some phases of his duty the counselor working with a group of thirty students can save both time and effort, and this results in maximal service at minimal cost. Farwell and Peters (5) reject this idea, saying that there is no economy of either, only better service to all students. They do not see group procedures as a

panacea for providing guidance with a minimal staffing problem. The present writer agrees that school counselors must accept the idea that group procedures and counseling the individual supplement and complement each other. Materials by Bennett (2), Super (27), and Koile (15) present different positions with respect to group techniques but they all endorse group procedures for guidance purposes.

Bennett (2) has said that experimental research on various phases of guidance has not yet caught up with the rapid expansion in varieties of group procedures described in guidance literature. This is explained by the relative newness of the field and the lack of clear goals ahead. Guidance is a learning process; some aspects can best be carried on in an individual situation; others can best be handled in a group situation (2), p. 97. All services should be part of an organized program, and all phases should be helpful to the individual. The purpose served by group procedures is that of the furtherance of learnings leading to self-knowledge and self-direction.

The orientation and the approaches to learning in group programs are different. Koile (15) thinks there is real danger that group guidance activities, which often operate on the fringe of respectability, may attain only marginal effectiveness and give a poor demonstration of how neglected problems may be served in group work. Although operating outside the pale of the accepted pattern, group guidance

activities are springing up throughout the nation's schools. Koile believes they are the most prevalent guidance services. Some school officials feel they are getting an inexpensive and easily administered counseling program. "Educational activities labeled 'group guidance' have been bootlegged into the curriculum or have come into existence because of the inadequacies of the regular instructional program" (15, p. 483.) There is no effective substitute for a counseling program, but Koile agrees that the purposes of group guidance may be (1) to impart information, (2) to provide opportunities for students to discuss problems and issues related to their educational and occupational plans, (3) to give students the opportunity to accept responsibility for their own learning in a group situation, and (4) to give students opportunities to develop effective interpersonal relations.

#### Benefits from Group Guidance

Bennett (5) suggests the need for a re-examination of the purposes of group procedures and their place in the guidance program. These considerations listed by Bennett are supported by experience and research:

1. Group procedures are an integral part of the guidance program and serve purposes which cannot be achieved through counseling alone.
2. Group guidance cannot be used as a substitute for the individual interview.

3. Adequate guidance of individuals, with self-direction as an objective, requires the provision of planned opportunities for learning with respect to self-appraisal, educational and vocational planning, school and life adjustment, and personal development.

4. Group study and discussion of common problems serve important functions for individuals.

5. There are various levels and types of competence required for different phases of group guidance.

Bennett (5, p. 343,) also lists important considerations in planning organization and staff relationships for group guidance:

1. The study of individual students must be continuous, and significant findings must be incorporated in the individual's school records.

2. Instruction, counseling, and student activities must be planned co-operatively with the purpose of synchronizing the individual's experiences in these three areas. Bennett thinks the surest way to relate guidance instruction and counseling is for one staff member to perform both functions. The writer of the present paper subscribes to this theory and advocates the use of classes of a general education nature for the interpretation of test results of the multifactor test batteries, which is the specific problem under study.

3. Contributions of staff members to group

procedures will vary with the organization of a school and the competencies of its staff.

Horst (11) offered three recommendations for counselors in reporting test results to students: (1) Find out what the scores mean. (2) Explain the scores to the students. (3) Do your best to get the students to act in accord with the data. A graphic representation of these test scores, designed to permit easy comparison of the individual scores with local and national norms was described by Zeigler, Bernreuter and Ford (35). North (18) summarized policies and practices followed by private schools which are members of The Educational Records Bureau, and he noted that these schools generally released a large part of the test data they obtained. Durost (4) advocated the use of stanine scores based on local testing data for reporting scores to teachers, pupils, and parents. These examples of practices deemed to be successful have continued to be numerous. However the present writer found instances of educators who wrote of the ineffectiveness of group interpretation of test results and, in some instances, of the ineffectiveness of any interpretation of test results.

Wedeen (29) recognized the uses as well as the misuses of aptitude tests. She was disconcerted when she found college freshmen using aptitude test results as the major determinant of their future courses. Uncertainties concerning educational and vocational selections are normal among a

freshman population, but if the functions of aptitude tests are impressed on students at the high school level much time and energy which is wastefully expended might be saved. Wedeen divided a number of problems which high school students need to understand concerning aptitude tests into three areas. First, the function of an aptitude test is to measure achievement potential in a specific area. Supplementary factors mitigate against the fulfillment of this worthwhile objective. Many times the results do not measure the student's true potential for achievement because of his poor verbal skills. Secondly, vocational aptitude involves features other than technical skills. There is the factor of personality. Interest tests are available, but they are merely guides, and the student should understand that the Kuder, for example, which may be interpreted by his high school counselor gives direction only. Thirdly, there is the factor of job availability. Fitting into the proper groove does not automatically make the choice of an educational plan or a vocation the right thing to do. Those who guide formative youngsters should be certain that the limitations of aptitude tests are understood.

In a panel discussion (1961) on the counseling function in guidance, a member of the panel stated that he could count on the fingers of one hand the parents who had expressed anything but a genuine concern for efficient and sufficient counseling for their children (20). Two or three who claimed

there was no need for a school counseling service were members of the teaching profession who had all the answers for their own children and felt that other parents should be able to provide the same. Wedeen (29) stated that it is true that there are a few parents trained in psychometrics to a point beyond the training of most school staffs. Since group interpretation of multiple factor tests implies the dissemination of test results to parents, as well as students and teachers, the effectiveness of the release of test data has been considered. Herman and Zeigler (9) have studied the effectiveness of a pre-registration program in which test scores for freshmen matriculating at Pennsylvania State University were interpreted for parents. The study was made to evaluate the effectiveness of lectures and interpretations in conveying desired information and attitudes to the parents. The measurement of effectiveness was by means of pre- and post-lecture questionnaires. The study was summarized by specific answers on the questionnaires as to the parents' attitudes, and changes in attitudes, toward academic achievement, the University, and psychological testing; their ratings and changes in ratings of their children's academic abilities, vocational interests, and broad personality characteristics; their immediate recall of specific facts covered during the program by a lecturer; and their opinions of the program.

Specific findings on the questionnaires were:



1. A majority of parents held attitudes favorable to the goals of the program, and this number generally increased significantly after the program.

2. Prior to the program, most parents rated the personality characteristics and academic abilities of their children higher than did respectively the Bernreuter Personality Inventory and the Pennsylvania State University Academic Aptitude Examination. After the program, a large number of parents, though generally not a majority, shifted their ratings to correspond more closely to the Bernreuter and the Academic Aptitude test.

3. A comparison of parent vocational interest ratings of their children made prior to the lecture, with the children's actual scores on the Strong Vocational Interest Blank showed a mean agreement of 13.9 out of 35 occupations for males and 9.9 out of 22 occupations for females. After the program the mean agreement in the case of males rose significantly to 17.8 occupations; for females there was a nonsignificant increase to 12.2 occupations.

4. Immediate recall of a number of specific facts significantly exceeded chance expectations in all but one case. In addition, the parents acquired a good deal of knowledge concerning the strengths and weaknesses of their children in various academic areas.

5. A very large majority expressed favorable opinions of all aspects of the program.

Literature closely relevant to the particular focus of the preceding study is sparse, but in another qualitative study of group work, Hoover and Micha (10) asked parents of high school students to complete Kuder Preference Records according to pre-conceived ideas of the interests of their children, and the researchers then compared these records with the records of the children. It was reported that harmonious family relationships existed in cases of close agreement between the records of the parents and the children, and that there were conflicting home situations in the cases of marked discrepancies between the records. The question still under consideration is whether parents should be told test results. Simple solutions can divert attention from the difficulties, but simple rules help. A test service bulletin of The Psychological Corporation (21) gives two principles and one verbal technique to use in communicating the information obtained from testing. The first rule: Parents have a right to know whatever the school knows about the abilities, the performance, and the problems of their children. The second rule: The school has an obligation to communicate understandable and usable knowledge. Two elements to be considered are, whether the counselors themselves know what they are trying to get across, and how they are going to put it across. Two kinds of information are of the utmost importance, test results of the individual and something about the test and its relationship to the performance of

others who have taken it. Percentiles, grade placement scores, or a profile, may be what the counselee can best understand, but it is the counselor's effectiveness that insures usable information. The verbal technique mentioned consists of a few words: "You score like people who...." The completion of the sentence depends on the test, the reason for testing, and the person to whom the information is being given.

Counselors try to impart the results of test batteries because there is evidence that there is a real chance that this information will help those whom they test toward a worthwhile goal. IQ's are regarded by many as numbers that should rarely if ever be reported as such to students or their parents, but some writers (20), (28) advocate telling parents their children's IQ's. Robert Topp believes the undesirable consequences come about, if they do at all, from attitudes of parents toward the information, not from the IQ level of children. He believes that keeping parents in ignorance of facts which concern their children because their attitudes might be wrong is indefensible. A cardinal principle of mental health is "know thyself". Knowing children's weaknesses and strengths and accepting them is a part of this knowing. It is as correct to assume that knowing the test results of the Differential Aptitude Test battery without qualification and explanation will result in misinterpretation, as to assume that knowing the IQ

without proper communication of the limitations of the test will have undesirable consequences.

Wilson (32) wrote in the Phi Delta Kappan that there were two good reasons why parents should not be told the IQ's of their children. The first, he said, was that we do not know the IQ, and the other was that we have no way of communicating this information to the average parent. The counselor who has considered the interpretation of multifactor test results to groups of students could use these same two arguments against doing so. The present study, however, found much literature supported the theory that the clientele served by professional workers is much more capable of understanding these matters than many had thought possible. Parents and students are being informed about many matters formerly considered beyond their comprehension, or not within their ability to accept with reasonable objectivity (28). A safeguard for the counselor interpreting any test results is to make clear that many factors other than intelligence enter into scholastic success, and a test, at best, represents only a sampling of the individual's abilities.

#### Dangers and Safeguards in Group Guidance

Super examined the limitations of group methods and stated the most important limitation stemmed from the assumption that orientation results in adjustment. This was demonstrated in studies such as Kefauver and Hand's (13).

They reported that the percentage of low-ability pupils in junior high school aspiring to go to college was increased, rather than decreased, by exposure to a course in educational and occupational opportunities. Studies at the University of Minnesota showed that occupational courses did not appreciably improve the educational-vocational adjustment of students unless they were combined with counseling, which assisted the students in applying to his own case the facts to which he was exposed. From findings such as these, Super felt warranted in concluding that only the better adjusted, more insightful, more self-directing individuals were able to profit much from group guidance which consists largely of the dissemination of facts.

However, Super proceeded to relate how group guidance services could fit into a guidance program in an educational institution. Orientation programs are considered primarily as a function of schools. Factual information should be given students before vocational problems become acute. There are times in the development of young people where the need to make choices is imperative, and Super asked if it were at all likely that group guidance could meet the needs of the great majority of students, leaving individual counseling for special cases only. His answer to this question was negative. He stated that it will always be true that most people can benefit from opportunities for individual counseling. Super conceded that a program of

group-guidance could render people better able to make effective use of counseling services (25).

The value of precounseling orientation was questioned by Froelich (7) in an investigation of the effectiveness of precounseling orientation on clients' readiness for counseling. He concluded that the brief orientation period produced no significant differences between oriented and non-oriented subjects with respect to: (1) following through in requesting counseling, (2) the clients' concept of counseling, or (3) the amount of time spent on certain topics in counseling interviews. Roeber, Smith, and Erickson (23, p. 7) agree in principle:

While group methods frequently serve to provide pupils with general information related to their needs, the ultimate solution of personal problems can be achieved only through personalized assistance. Counseling alone, within an atmosphere conducive to a close scrutiny of personal assets and limitations, adapts itself to the needs of the individual as he is confronted with problems and as he weighs possible courses of action.

A classification of problems of high school level in the following order of frequency is made by Froelich and Darley (6):

1. Vocational

- a. Discrepancy between students' ambitions and abilities

- b. Inadequate information

- c. Indecision

2. Educational

- a. Discrepancy between educational ambitions and abilities

b. Underachievement  
c. Over achievement (excessive compensatory  
studying)

3. Social adjustment
4. Financial
5. Family relationships
6. Physical

This listing has implications for evaluative data needed by students on the first two problems, and points out two issues discussed by Adams and Torgerson (1). Does the interpretation of test results to the student create a barrier, or is such data indispensable in counseling situations? Should group guidance or individual guidance receive greater emphasis in the high school program? These are controversial questions in guidance. Those who question the advisability of interpreting test data to students base their position on these premises:

1. The influence of unmeasured variables is so great that the measured characteristics, by comparison, are relatively insignificant.
2. Existing tests have serious limitations.
3. Test data in guidance tends to make the student a dependent receiver of information rather than a solver of problems.
4. The interpretation of test results may threaten the student's concept of self.
5. Diagnosis is often overstressed at the expense of treatment.

Adams and Torgerson (1) point out that those who minimize the importance of test data in guidance may do so because of exclusive dependence on one approach to guidance problems. Varied approaches are valid in varying degrees with different students, different types of problems, and at different stages in the counseling process. Distrust concerning the use of test data has developed questionable practices. These authors (1, p. 532) have summarized a number of principles for the use and interpretation of evaluation data in guidance:

1. Test data should be considered in the context of all other available information.
2. Test results and other evaluation data should be interpreted in terms of probabilities, rather than certainties.
3. The best available tests for the purpose should be used.
4. Responsibility for the administration of tests and the interpretation of test data should be placed in the hands of trained guidance workers.
5. Guidance workers should use caution in interpreting data from all tests on which the examinee can falsify or distort his responses.
6. Counselors should present test data to students in such a way that (a) the data are brought into the counseling interview as they help in meeting a need; (b) they are presented objectively and impersonally by the counselor, with



the student interpreting their personal meaning for him;  
(c) the student is encouraged to express his reactions to the test results.

7. The counselor's approach in an interview involving test interpretation should be conditioned by his realization that the student's interpretation may be an emotional one.

Since the interpretation of evaluation data to students affects their self-concepts and may produce conflicts, effort should be made to individualize the group program of test interpretation. An increasingly large number of school systems are carrying on large-scale programs of test interpretation in group guidance situations. Adams and Torgerson (1, p. 541) in a chapter on using evaluation data, included a sample report on an actual experience in the interpretation of test data to an eleventh-grade class. The summary of the manner in which multiple factor test information was presented to these students seems appropriate to the problem under survey in the present study. These steps were followed: (1) Developing general concepts basic to student self-appraisal. (2) Studying the significance of test data for problems of vocational choice. (3) Preparing profiles of test data. (4) Relating the data to the individual's own problem. (5) Preparing for individual interviews. The test batteries used in the sample study were California Achievement Tests, Advanced Form A; Differential Aptitude Tests, Form B; Kuder Preference Record - Vocational.

A second study which seemed to have a particular bearing on the value of group interpretation of multiple factor tests to high school students was made by Frank Nugent (19). The purpose of the exploratory study was to investigate the relationship between the coincidence of a person's vocational interests and aptitudes and certain aspects of his adjustment. Many counselors have been operating on the assumption of a relationship of aptitude and interest to adjustment. They synthesize test results when helping counselees interpret their various test scores. In fact, many counselors feel that interest-aptitude consistency is a favorable indication of adjustment. To test this assumption of interaction, the following hypothesis was developed and tested: High school boys with marked agreement between interest and aptitude scores will show more favorable scores on a psychological inventory than will high school boys with marked interest-aptitude discrepancy.

Within the limitations of size and composition of the sample, the following tentative conclusions were drawn from the findings: (1) The hypothesis was supported for eleventh-grade subjects on total adjustment, whether using California Psychological Inventory (CPI) elevation scores or a composite of judges' ratings of CPI profiles. The hypothesis was not substantiated on ninth-grade subjects on these criteria. The hypothesis was substantiated at both grade levels on CPI scales measuring personal adequacy and personal security.

(2) The hypothesis was supported at eleventh-grade level by scores on CPI scales measuring social maturity. Ninth graders were not differentiated by social maturity scores. Certain inferences were made from the findings. Interests and aptitudes probably are personality characteristics whose inter-relationships affect adjustment. This interaction shows some relationship to developmental processes. Since the intensity of maladjustment tends to increase from the ninth to the eleventh grade with individuals who have marked interest-aptitude discrepancies, counselors should attempt to help these individuals as early as possible (19). The other instruments used in the study were the Kuder Vocational Preference Record, to measure interest, and the Differential Aptitude Tests, to obtain aptitude scores.

Testing is a fundamental technique for processes of educational and vocational counseling. The value of quantification and the relation of individual scores to normative standards has been discussed frequently in guidance literature. The contribution of standardized tests to the counseling process is viewed qualitatively by Kirk (14). She names three contributions which may be termed extra-measurement uses of tests in counseling. The three areas considered are called clinical diagnosis, self assessment, and interactive facilitation. They represent values directly to the counselor, to the counselee, and to the interaction between them. Clinical diagnosis is the prerogative of the clinical or

counseling psychologist. Self assessment in an area open to all counselors who are competent with counseling techniques. Interactive facilitation applies to the use of test data by competent counselors.

A vitally important contribution of tests, both measurement-wise and extra-measurement-wise, is that of gain in self-knowledge for the purpose of self-evaluation and thus development of insights. The mere taking of some tests, with the necessity for recording a response, compels thought and self investigation. Vocational interest tests, such as the Kuder, may be directly helpful to a counselee, since they describe the function or content of occupations rather than simply listing them. In a sense, the testing situation may be likened to a laboratory in which one learns about oneself in a real life situation and then can gain perspective upon it from counseling discussion. In planning the content of group counseling sessions, the goal is to effect as much learning as possible for the individual members in the amount of time available. The objectives of counseling, whether individual or group, are to assist the individual in evaluation of himself, in decision making, and in carrying through of learning to action.

Since it was the effectiveness of an aspect of counseling which was studied, the information gathered from the literature was from the viewpoint of educators of differing opinions. Finally, a discussion of fallacies concerning

tests was reviewed. Cottle and Downie (3) named seven common beliefs and pointed out errors in thinking. The first listed was "belief in tests". The competent counselor knows what a test can do and what it cannot do. This is not a matter of faith but of competence. The second is the fallacy of simplicity. Test results on the DAT furnished by a state-wide testing program appear simple to interpret. When the counselor interprets in terms of patterns of scores and differences between scores on parts of the battery, the meaning this has for a high school student is not simple. The third and fourth fallacies had to do with test labels and named scales. The fifth fallacy centered about prestige of the test author and the generalizing from a known test to a similar test. For instance, when a counselor tries to compare interests of clients in mechanical engineering on the Kuder with the same clients on the engineering scale of the Strong Vocational Interest Blank there appears to be discrepancies. Another generalization concerned tests developed on a given group. Counselors often assume such tests will be useful with another group, which actually may be quite dissimilar. Local use may indicate that test scores derived on other groups actually apply. The seventh fallacy was the belief that validity and reliability apply to tests alone.

In discussing multifactor test batteries, Cottle and Downie (3) reported that the type of tests included in these batteries are representative of various mental abilities and

are usually comprehensive enough to be used in consideration of many different occupations. Basically there are two types of multifactor batteries. One is of a general nature, used in counseling individuals when all capacities and traits are being considered. The other type is made up of batteries specific to a given purpose. The most important of these batteries to high school and college counselors, according to these authors, is the Differential Aptitude Battery. This battery is made up of eight tests assembled in seven separate booklets. The DAT was designed as a tool in the educational and vocational counseling of high school youth. Norms have also been provided for eighth grade students.

Cottle and Downie (3) state in evaluating vocational interests tests that the counselor will find the Kuder useful in describing areas and fields of general activity with two types of clients - the young individual who has made little or no decision about his choice, and the individual who has made a choice and wishes some means of verifying it. The Kuder is very useful in dealing with high school and junior high school students. Over the high school years the instrument may be used again and again to measure growth and development in vocational inventories. Vocational interest inventories have their limitations. They can be falsified, but there seems to be no really valid reason why a student would fake the results in a voluntary counseling situation.

## SUMMARY AND CONCLUSIONS

Indecision as to the most appropriate method to use in the interpretation of multiple factor test results prompted the present study. The review of literature helped to identify definite advantages which might be gained in group procedures planned to meet the needs of students in Leavenworth Junior High School who were participating in a state-wide testing program. Several areas evolved clearly. They included (1) common elements and differences in group guidance and individual counseling, (2) benefits from group guidance, and (3) dangers and safeguards in group guidance. It was also clearly indicated in the literature that the needs of all youth placed the responsibility beyond the scope of individual counseling. It has likewise been indicated that group guidance has its justification by certain of the reasons which also justify the supplying of individual counseling.

Some of the conclusions obtained from the review of the literature on group guidance which have implications for the interpretation of test results are as follows:

1. Group guidance is a necessary part of the school guidance program, assuring all students a measure of guidance.

2. Group services have been extended in schools over the nation since 1950.

3. Group procedures are effective in the interpretation of test results of multifactor test batteries.

4. Groups consisting of as many as thirty students have made effective use of the interpretation of test results prior to individual conferences.

5. The need for individual counseling may be increased by the use of group procedures. Increased attention to individual students may result in follow-up counseling interviews.

6. Guidance practices of either type have as their goal the satisfaction of pupil needs.

7. Group guidance procedures are distinct in method and effect. A unique characteristic of group guidance is the effect which the group situation has upon the form which an individual problem may take.

8. More students with common problems may be reached through group guidance processes than would be possible otherwise. The possibility of dealing with such problems as analysis questionnaires, DAT and Kuder profiles or work sheets, critical educational choices, and vocational plans is greatly increased by the use of group guidance.

9. Group guidance and individual counseling are most effective when they are used together. The effective way in which the group situation bears upon the individual problem is a characteristic of group interaction.

10. There is need for specific research on the actual interpretation of multifactor tests in group situations.



The above propositions drawn from recent guidance literature indicate that there is evidence to support the value of group guidance when it is used to obtain certain objectives, such as the interpretation of test results, promotion of self-understanding, selection of educational plans, and exploration of educational opportunities. But the benefits obtained from group guidance do not displace the need for individual counseling. Group processes may result in an awareness of the need for individual counseling and a desire to seek such counseling. The effectiveness of individual counseling also may be enhanced by prior group guidance.

## ACKNOWLEDGMENTS

The writer wishes to take this opportunity of expressing her appreciation to her adviser, Dr. H. Leigh Baker, who has contributed of his time and energy in the furtherance of this investigation. The cooperating teachers and administrators in Leavenworth Junior High School have contributed in many ways to the successful completion of this study.

L. W. H.

## LITERATURE CITED

1. Adams, Georgia S., and Theodore L. Torgerson.  
Measurement and Evaluation. New York: The Dryden Press, 1956, 658.
2. Bennett, Margaret E.  
Guidance in Groups. New York: McGraw Hill Book Co., 1955, 411.
3. Cottle, William C. and N. M. Downie.  
Procedures and Preparation for Counseling. New Jersey: Prentice-Hall, 1960, 330.
4. Durost, Walter N.  
The use of local stanines in reporting test results in a large cosmopolitan school system. Sixteenth Yearbook of the National Council in Measurements Used in Education. New York: The Council (21 Audubon Avenue), 1959, 140-148.
5. Farwell, Gail F., and Herman J. Peters, editors.  
Guidance Readings for Counselors. Chicago: Rand McNally & Company, 1960, 685.
6. Froelich, Clifford P., and John G. Darley.  
Studying Students: Guidance Methods of Individual Analysis. Chicago: Science Research Associates, 1952, 411.
7. Froelich, Clifford P.  
Must counseling be individual. Unpublished Monograph, University of California, Berkeley. Educational Psychological Measurement. (In Press).
8. Gribbons, Warren D.  
Evaluation of an eighth grade group guidance program. Personnel Guidance J., May, 1960, 38(9):740-745.
9. Herman, Louis M., and Martin L. Zeigler.  
The effectiveness of interpreting freshman counseling - test scores to parents in a group situation. Personnel Guidance J., October, 1961, 40(2):143-149.
10. Hoover, K. H., and H. K. Micha.  
Student - parent interest comparisons in counseling high school students. Personnel Guidance J., 1956, 34:292-294.

11. Horst, Paul.  
How much information on test results should be given to students: Views of a research psychologist. J. of Counseling Psychology, Fall, 1959, 6:218-222.
12. Kamm, R. B., and C. G. Wrenn.  
Client acceptance of self-information in counseling. Educational Psychological Measurement, 1950, 10:32-42.
13. Kefauver, Grayson N., and Harold C. Hand.  
Appraising Guidance in Secondary Schools. New York: Macmillan Company, 1941.
14. Kirk, Barbara A.  
Extra-measurement use of tests in counseling. Personnel Guidance J., April, 1961, 658-661.
15. Koile, Earl A.  
Group guidance - a fringe activity. School Review, December, 1955, 63(9)483-485.
16. McDaniel, Henry B., and G. A. Shaftel.  
Guidance in the Modern School. New York: Henry Holt and Co., 1956, 526.
17. McDaniel, H. B., and others.  
Readings in Guidance. New York: Henry Holt and Company, 1959.
18. North, R. D.  
Policies and practices of ERB member public schools in releasing test results. Education Record Bulletin, 1959, 74:90-104.
19. Nugent, Frank A.  
The relationship of discrepancies between interest and aptitude scores to other selected personality variables. Personnel Guidance J., June, 1961, 388-395.
20. Parmenter, M. D.  
The group work function in guidance. School Guidance Worker, November, 1961, 17(2):11-17.
21. Ricks, James H.  
On telling parents about test results. Test Services Bulletin, December, 1959, 54:1-4.
22. Rinn, John L.  
Group guidance: Two processes. Personnel Guidance J., March, 1961, 39(7):591-594.

23. Roeber, Edward C., Glenn E. Smith and Clifford E. Erickson.  
Organization and Administration of Guidance Services.  
New York: McGraw-Hill Book Company, 1955.
24. Super, Donald E.  
The critical ninth grade: Vocational choice or vocation-exploration. Personnel Guidance J., October, 1960, 39(2):106-109.
25. Super, Donald E.  
Group technique in the guidance program. Educational Psychological Measurement, 1949, 9(3):496-510.
26. Super, Donald E.  
The multifactor tests: Summing up. Personnel Guidance J., September, 1957, 36(1):17-20.
27. Super, Donald E.  
The use of multifactor test batteries in guidance. Personnel Guidance J., September, 1956, 35(1):9-15.
28. Topp, Robert.  
Let's tell parents their children's I. Q.'s.  
Phi Delta Kappan, June, 1959, 342.
29. Wedeen, Shirly U.  
Uses and misuses of aptitude tests. School Guidance Worker, February, 1961, 16(5):13-15.
30. Willis, Benjamin C.  
The contribution of guidance to the high school educational program. Personnel Guidance J., April, 1957, 35(8):489-94.
31. Willis, Benjamin C.  
Importance of group work. School Guidance Worker, November, 1959, 15(2):19.
32. Wilson, John A.  
Let's not tell parents their children's I. Q.'s.  
Phi Delta Kappan, June 1959, 343-345.
33. Wright, E. Wayne.  
A comparison of individual and multiple counseling in the dissemination and interpretation of test data. Unpublished doctoral dissertation, University of California, 1957.
34. Wright, Wayne E.  
Multiple counseling: Why? When? How?. Personnel Guidance J., April, 1959, 37:551-57.

35. Zeigler, Martin L., Robert Bernreuter, and Donald H. Ford.  
A new profile for interpreting academic abilities.  
Educational Psychological Measurement, Autumn, 1958,  
18:583-588.

GROUP INTERPRETATION  
OF MULTIPLE FACTOR TESTS

by

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B. S., Central Missouri State College, 1950

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AN ABSTRACT OF  
A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Education

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

1962

The problem was that of finding effective procedures for the counselor to use in giving students in an understandable and usable form the information which schools collect concerning their abilities and interest patterns. Writers have asked "Why use multiple counseling?" or "When should multiple counseling be used?" This study was made to summarize some of the answers found in recent guidance literature, and to interpret the findings in order that they might be useful to the counselors of Leavenworth Junior High School in selecting procedures for the interpretation of test results of multiple factor tests.

The procedure used was library research. Guidance literature published since 1950 was examined for the views expressed by educators about the proper functions of group guidance and the place for it in the total program. Since it was the effectiveness of an aspect of counseling which was being studied, the information was divided into three sections centering around three major points, (1) common elements and differences in group guidance and individual counseling, (2) benefits from group guidance, and (3) dangers and safeguards in group guidance.

Parmenter (20) in writing of the common elements and differences in group guidance and individual counseling mentioned the current emphasis on guidance services of a preventive and developmental nature, the recognition that all students require such guidance services, the increase in school populations, the shortage of qualified guidance



personnel, and other factors which indicate the necessity of employing group procedures. Benjamin C. Willis (30) believed group guidance programs to be of inestimable value since all young people have problems. Rinn (22) found group guidance services intriguing concepts, but he commented that few schools had successful group guidance programs. Few writers agreed on what group guidance meant.

McDaniel (17) acknowledged many advantages - efficiency, economy, and social values - but pointed out some limitations of group guidance, such as unsolved individual problems. Bennett (2) wrote that experimental research had not caught up with the rapid expansion in varieties of group procedures, and devoted a chapter to guidance as a learning process. She believed that some aspects of the guidance services could best be handled in an individual situation, others more effectively in a group situation.

Benefits from group guidance supported by experience and research were listed by Bennett as:

1. Group procedures serve purposes which cannot be achieved through counseling alone.
2. Group guidance cannot be used as a substitute for the individual interview.
3. Adequate guidance of individuals, with self-direction as an objective, requires the provision of planned opportunities for learning.
4. Group study and discussion of common problems serve important functions for individuals.

5. There are various levels and types of competence required for different phases of group guidance.

Super (25) pointed out some dangers and safeguards in group procedures. He stated that the most important limitations stemmed from the assumption that orientation results in adjustment. He felt warranted in concluding that only the better adjusted, more insightful, more self-directing individuals are able to profit much from group guidance which consists largely of the dissemination of facts. However, Super conceded that group guidance could render people better able to make effective use of counseling services. Adams and Torgerson (1) summarized a number of principles which safeguard against the dangers of various approaches with different types of problems:

1. Test data should be considered in the context of all other available information.

2. Test results and other evaluation data should be interpreted in terms of probabilities, rather than certainties.

3. Available tests best for the purpose should be used.

4. Administration and interpretation of test data should be placed in the hands of trained guidance workers.

5. Guidance workers should use caution in interpreting data from all tests.

A review of Cottle and Downie's (3) discussion on the fallacies of tests revealed seven common beliefs and errors in thinking. The first fallacy discussed was "belief in tests". The competent counselor does not "believe" in tests; he knows what a test can do and what it cannot do. The second is the fallacy of "simplicity". Test results may look simple, but when a counselor starts thinking in terms of patterns of scores the meaning that this has for a client is not simple. The third fallacy is that of "test labels". Just because a test is called a test of "critical thinking" does not mean that it is. This is also true of "named scales or keys". A fifth fallacy centers about the "prestige" of the test author. Only research showing that the test is valid for the purpose for which it was constructed can guarantee its validity. Another fallacy is "generalizing" from a known test to a similar test, or from a sample similar to the test norm group to one which is not like the standardization group. The seventh fallacy is that validity and reliability apply to tests alone. These concepts apply to every tool the counselor uses and to the counselor also.

Several conclusions resulted from the study: (1) pupil needs are the basis for all guidance, (2) group procedures are a part of the total guidance program, and (3) group guidance processes are a complement and supplement to individual counseling.